Massachusetts Health Care Cost Trends
Part III: Health Spending Trends for Privately Insured 2006-2008

Executive Summary

February 2010

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Introduction

As national health care spending has grown to an estimated 16.2 percent of Gross Domestic Product in 2008,[1] Massachusetts and the nation are grappling with ways to mitigate the growth in health care costs. Each year, data at the national level are made available to document total spending growth, but until now similar data in Massachusetts have been lacking. This report will inform policy-makers and the public about factors contributing to the growth in health care spending in Massachusetts. Understanding these factors will better prepare the Commonwealth to evaluate and develop reforms that have the greatest impact on slowing the growth in health care costs while maintaining quality of care.

About This Report

This report is the third in a series to be issued by the Massachusetts Division of Health Care Finance and Policy (DHCFP) as part of its new responsibilities under Chapter 305 of the Acts of 2008. The law requires DHCFP to provide information and analysis on health care cost trends and the factors that underlie these trends. The information presented in these reports was developed with the strategic input of staff from Brandeis University's Heller School for Social Policy and Management, and with analysis conducted by Mathematica Policy Research, Inc. and Oliver Wyman Actuarial Consulting, Inc.

This report documents the major trends in total spending for care covered by fully-insured and self-insured comprehensive private health insurance in Massachusetts from 2006 through 2008. Total spending includes the amounts paid by insurers and self-insured employers, as well as out-of-pocket expenses for covered services including co-payments, coinsurance and deductibles paid by members. Premium payments made by members and employers are not included. Findings are based on claims data provided by six major health insurers in Massachusetts who provide insurance to roughly 90 percent of privately insured. The analyzed claims represent roughly 65 percent of privately insured Massachusetts residents. Most of the remaining third of privately insured were enrolled with insurers that are affiliated with one of the six insurers studied, but whose claims data were not provided.

Major Findings

- **Between 2006 and 2008, private spending per member for health care in Massachusetts grew by 15.5%, or 7.5 percent annually.** More than 75 percent of the growth in spending from 2006 to 2008 occurred in outpatient hospital facilities and physician and professional services. Imaging services accounted for only 9 percent of total spending in 2008. However, roughly 12 percent of the growth in spending overall was due to increased spending on imaging services from 2006-2008, representing a disproportionate share of the growth in expenditures. Outpatient procedures and cancer therapies provided in hospital outpatient facilities also contributed heavily towards growth in expenditures.

- **Price is the single most important factor fueling rising health care spending.** Spending per day on inpatient hospital care represented more than 90 percent of the growth in spending for inpatient hospital care, with increased prices accounting for nearly all of this growth. Similarly, more than 80 percent of the growth in spending for physician and professional services was attributable to increased prices. On the other hand, both higher prices and greater utilization of services drove higher spending for hospital outpatient facility services.
- **One area of particular concern – and opportunity – is the wide variation in prices paid by private insurers for the same service by different providers across the state.** The variation in prices for commonly provided services was greatest for facility charges, which varied by as much as 18 to 1 for some high-volume outpatient facility services. Variation was as large as 3 to 1 for some high-volume professional services.
- In addition, **the data suggests that care is being provided in increasingly expensive settings over time.** Outpatient facility-based care in Massachusetts is now almost entirely hospital-based and much of the growth in outpatient hospital expenditures was for care provided in teaching hospitals located in the metro Boston area. In addition, inpatient admissions are shifting toward higher-cost providers with the percent of total private inpatient admissions that went to teaching hospitals increasing by 5 percent over the three year time period.
- **Growth in health spending (including both payments made by insurers and by members in the form of cost-sharing) varied by insurance market segment, with expenditures per member year growing faster for those enrolled in self-insured and large group markets when compared with those enrolled in mid-sized and small group markets.** This difference was largely due to small and mid-sized employers shifting more costs to employees in the form of higher cost-sharing over the time period studied. From 2007 to 2008, the medical trend for self-insured employers was higher than that for all fully insured markets, with self-insured employers experiencing a growth rate of 8.5 percent compared to 7.0 percent for fully insured employers.
- **Growth in health spending for members enrolled in individually purchased insurance, on the other hand, grew much more slowly at 2.0 percent for the three year period, with spending per member growing 4.4 percent from 2006 to 2007, and declining by 2.2 percent from 2007 to 2008.** This experience in the individual market reflects the impact of the availability of new products – including Young Adult Plans and Commonwealth Choice Bronze products – as well as the influx of younger and healthier people into this market segment. However, it should be noted that average per capita expenditures for members enrolled in the individual market were 25 percent higher than overall per capita expenditures in 2008, reflecting the older population with greater health needs enrolled in the non-group market.

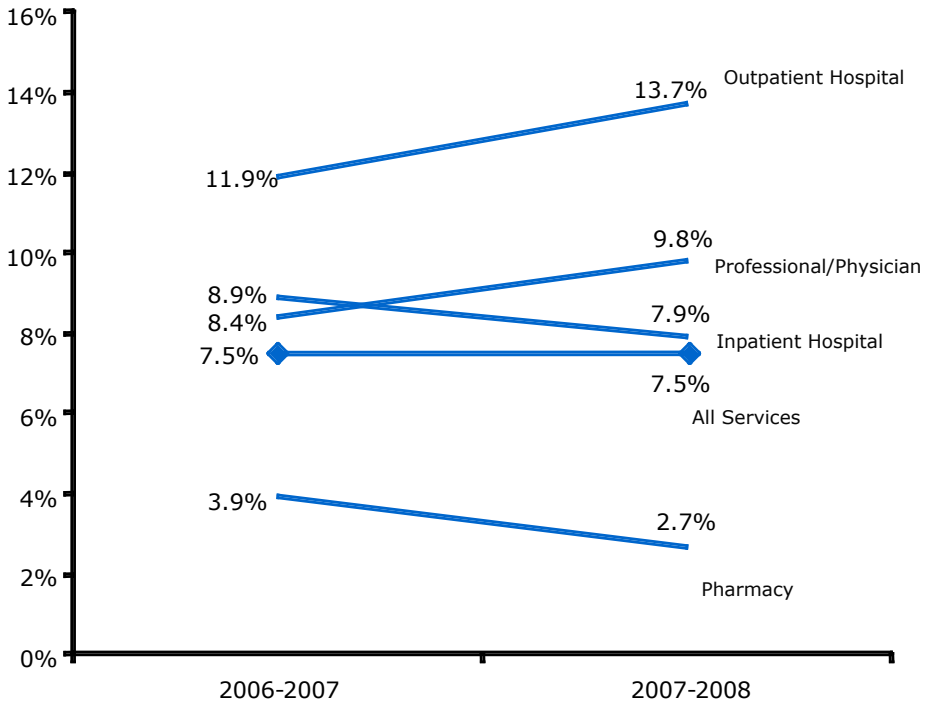
- **Over the three-year period, member cost-sharing (e.g., copayments and deductibles) increased as a percent of health spending for members purchasing individual coverage and for employees in small (<51) and mid-sized (51-499) groups.** Cost-sharing decreased as a percent of health spending for employees in large (500+) and self-insured groups during this same time period, meaning that increased spending was absorbed more by employers than was shifted onto employees in the form of higher cost-sharing in these two groups.

Overall Trends

Between 2006 and 2008, private spending for health care in Massachusetts per member increased 15.5 percent or 7.5 percent annually. (Figure 1). Total spending represented in the data increased by 6.9 percent from 2007 to 2008, compared with national estimates of private spending growth which increased by 3.9 percent over the same period.[2] It should be noted that this estimate of the growth in national spending does not include out-of-pocket spending on cost-sharing by members, whereas it is included in the analyzed claims data for Massachusetts.

Spending for outpatient hospital facility services and physician and professional services grew faster than other categories of services, particularly in 2008. Together, these two categories accounted for more than 75 percent of the total increase in spending for care over the three year period (Figure 2). Spending on outpatient hospital care represented 23 percent of all spending in 2008 but accounted for nearly 37 percent of total growth in spending over the three year period. Similarly, professional services comprised 32 percent of expenditures in 2008 but accounted for 39 percent of growth.

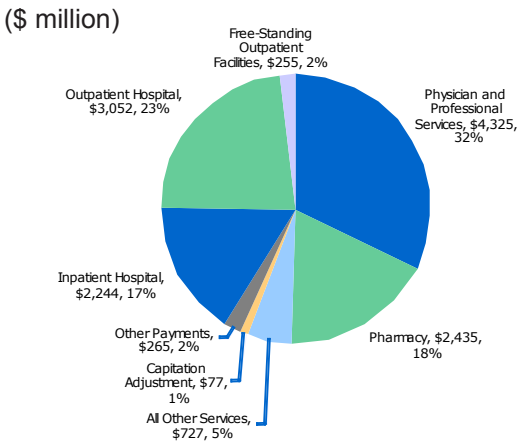
Figure 1: Annual Growth in Privately Insured Expenditures per Member, by Major Type of Service



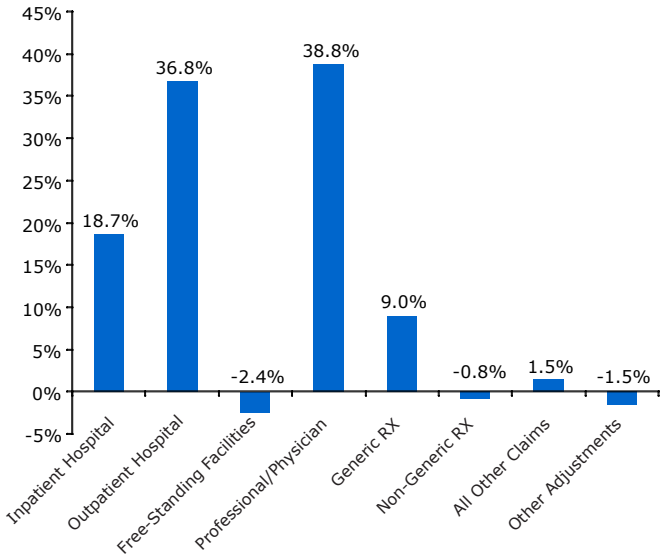
The remainder of growth in spending during the three year period was due to increased spending for inpatient hospital care – which grew at a rate (19%) consistent with its share of total spending (17%) – and growth in generic pharmaceuticals. Spending on brand drugs and freestanding outpatient facilities declined during the time period.

Figure 2: Distribution of Spending and Growth in Spending by Service Sector

Total Spending in 2008: $13.38 Billion



Total Expenditure Growth 2006-2008: $1.73 Billion



Note: Physician and professional expenditures include charges for services provided in any location of service (inpatient, outpatient hospital, free-standing facilities, offices, clinics and all other locations) and provided by primary care practitioners, specialists, nurses, podiatrists, therapists, psychologists, dentists and all other professionals. Outpatient hospital facility expenditures include facility charges for ambulatory care provided by an acute care hospital, including emergency room visits.

The portion of growth due to spending on pharmaceuticals (less than 9 percent) was much less than its share of total spending (18 percent). Moreover, because pharmacy spending grew well below growth rates in other service categories, it reduced the increase in overall health care spending.

Increased Prices Were a Key Factor in Spending Growth

Price increases were the major driver of spending growth in most service types. Spending growth may result from any combination of changes in the number of services provided (volume), the price paid per service, or the type of services provided (service mix). While price increases accounted for the major portion of overall spending growth, the impact of price increases varied by service type. (Table 1) Both higher prices and greater volume of services drove spending growth for hospital outpatient facility services. The complexity of services provided shifted slightly towards the delivery of less resource intensive hospital outpatient and professional services over this time period.

For inpatient services, trends were slightly different for teaching hospitals when compared with non-teaching hospitals. Price for all inpatient services—in particular price per day—was the major driver of spending increases. For teaching hospitals, increased volume was also a slight contributor

to trend, whereas for non-teaching hospitals the complexity of services provided was a slight contributor to trend.

In this analysis, price increases may include higher prices paid for the same service in the same location, an increase in services obtained from higher priced providers, or both. Future years' analyses will attempt to better understand these factors in spending growth.

Table 1: Drivers of Spending Growth, 2006-2007

Service	Total Growth in Spending for Service Area, 2006-2008	Annual Percentage Growth in Spending	Percentage Point Change in Spending Attributable to the Change in:		
			Price	Number of service units	Service mix
Outpatient facility services	$637.1 M	12.1%	6.6%	7.3%	-1.8%
Physician and other professional services	$671.2 M	7.9%	8.7%	1.9%	-2.7%
Imaging services (including both outpatient facility and professional fees)	$213.5 M	12.9%	6.0%	7.9%	-1.0%
Teaching hospital inpatient services (admissions)	$200.8M	8.5%	8.8%	0.4%	-0.7%
Non-teaching hospital inpatient services (admissions)	$105.4 M	8.5%	9.8%	-2.1%	0.8%

Note: Because of the relatively high rate of incurred but not reported claims in 2008, only 2006-2007 growth drivers are reported. The figures reported in the table were calculated for a "market basket" of services, representing about 90% of total spending in each major service category each year. Therefore, percentage growth rates reported here may differ from those presented elsewhere in the analysis. Inpatient facility charges for imaging services provided during a hospital stay are not included as part of "imaging services."

There Is Significant Variation in Prices

The prices that insurers pay for any selected service typically vary across insurers and providers. In 2008, the prices paid for services that accounted for high total expenditures or high total expenditure growth varied by many orders of magnitude, with price differentials typically equating to hundreds of dollars for the same service. The variation in prices for commonly provided services

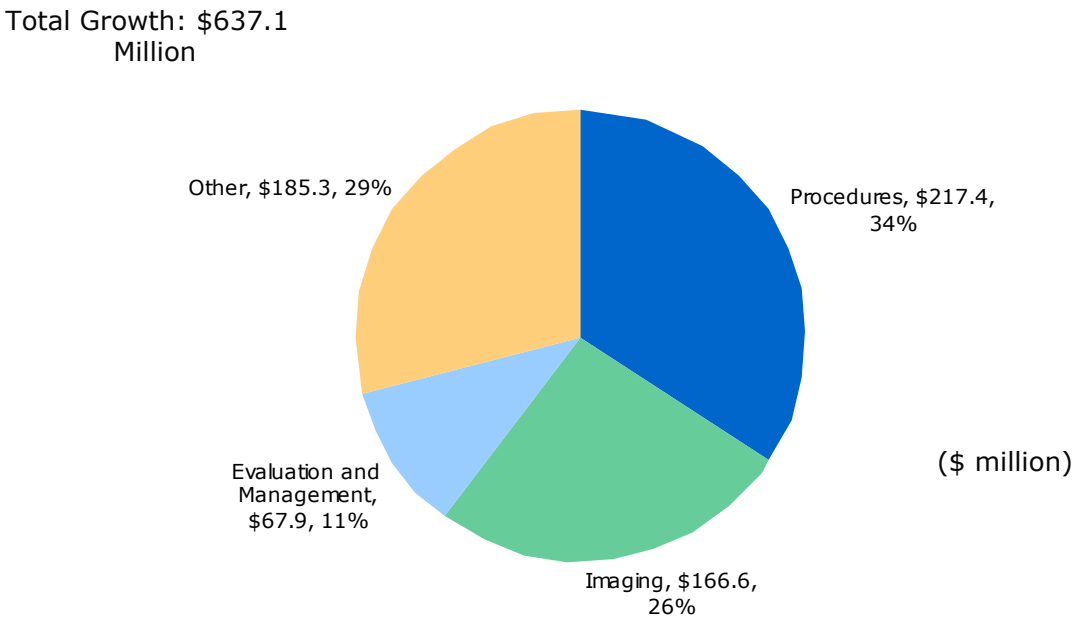
was greatest for facility charges, which varied by as much as 18 to 1 for some outpatient facility services. Variation was as large as 3 to 1 for some high-volume professional services. Some high-volume inpatient services showed as much as a seven-fold variation in prices, while other varied much less. For example, the highest prices paid for high-frequency diagnosis-related groups (DRGs) related to maternity care generally exceeded the lowest prices by a factor of 2 or more.

Key Areas of Growth in Hospital Outpatient Facility Services

Outpatient services accounted for 23 percent of total spending in 2008 but represented nearly 37 percent of the total growth in spending from 2006 to 2008. At the same time, inpatient hospital spending grew faster than the average growth overall and the contribution of inpatient hospital spending to total growth in spending (18.7 percent) was similar to its proportion of total spending (17 percent).

Most of the growth in spending for hospital outpatient facility-based care was associated with two major categories of outpatient services – procedures and imaging. From 2006 to 2008, procedures and imaging respectively accounted for 34 percent and 26 percent of the growth in total spending for hospital outpatient facility care (Figure 3). No one procedure accounted for a very large share of the growth in total spending for outpatient procedures or imaging. However, spending for some types of imaging (such as digital-image screening mammography) and certain procedures (such as cancer infusion treatments) grew relatively fast.

Figure 3: Contribution to Growth in Hospital Outpatient Facility Expenditures, 2006-2008



Note: Lab and other tests, durable medical equipment, other outpatient services, and claims without a CPT code are included in "all other."

Outpatient facility-based care in Massachusetts is now almost entirely hospital-based. Spending on outpatient care provided at freestanding facilities declined by 14 percent from 2006 to 2008, as these facilities closed, affiliated with or were purchased by hospitals. Conversely, spending on outpatient care provided at hospital-based facilities increased by 26.4 percent during this same period. While freestanding outpatient facilities represent a relatively small portion of overall outpatient spending (less than 10 percent), this trend is significant as prices paid to freestanding facilities were generally lower than those paid to hospital outpatient facilities.

Key Areas of Growth in Physician and Professional Services

Spending for physician and other professional services accounted for the largest share of total spending growth from 2006 to 2008, representing 39 percent of total expenditure growth. From 2006 to 2008, specialists accounted for 49 percent of spending growth in this category, reflecting the proportion of total physician and professional spending devoted to specialists (54 percent in 2008) (Figure 4). Primary care providers accounted for 32 percent of spending growth, also reflecting their contribution to total spending on physician and professional services (31 percent).[3] The rate of growth in spending on physician and professional services accelerated over this period, increasing 8.4 percent from 2006 to 2007 to 9.8 percent from 2007 to 2008. This increase was attributable almost entirely to growth in spending for "other professional services" which increased by 16.6 percent in the latter period (2007 to 2008). "Other professional services" include physical therapists, occupational therapists, speech therapists, psychologists, dentists, and other non-physician professionals. It should be noted that family therapy, individual psychotherapy, and psychiatric diagnostic interview exam were among the top ten physician and professional services accounting for the largest growth in expenditures for this service area from 2006 to 2008.

Figure 4: Contribution to Growth in Physician and Professional Services, 2006-2008

Note: "Primary care" includes general practitioners, family practitioners, internists, OB/GYNs, pediatricians, geriatricians, and nurse practitioners, as well as physicians classified as practicing public health, general preventive medicine and adolescent medicine. "Specialists" include all other physicians. "Other professionals" include all other nurses, midwives, podiatrists, therapists, psychologists, chiropractors, dentists, nutritionists, as well as professional claims where the provider type is unknown.

Spending at Academic Medical Centers

More care is being provided in academic medical centers – both on an inpatient basis and in particular on an outpatient basis.

Teaching hospitals in Massachusetts accounted for 62 percent of the growth in spending for inpatient care from 2006 to 2008 and represented a similar proportion (64 percent) of total inpatient spending in 2008. However, teaching hospital admissions as a percent of all hospital admissions rose from 47 to 49 percent statewide over this period, or by about 5 percent. Admissions to non-teaching hospitals located outside of the Boston area declined by more than 3 percent during each of the years studied.

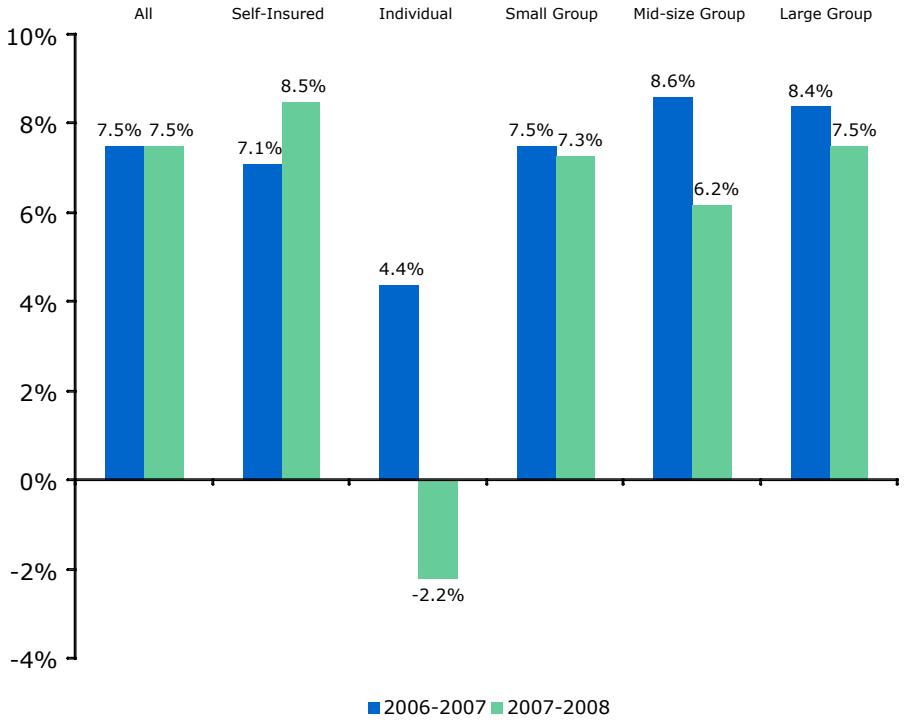
In the outpatient setting, teaching hospitals accounted for a disproportionate share of the growth in spending. Whereas teaching hospitals accounted for only 54 percent of total outpatient facility spending in 2008, they represented 63 percent of the growth in spending for this area from 2006 to 2008. The majority of this growth in spending (55 percent) was at teaching hospitals located in the metro Boston area, which was disproportionately large compared to the teaching hospital share of total spending on hospital outpatient facilities (45 percent in 2008).

Growth in Expenditures by Insurance Market Segment

Growth in health spending (including both payments made by insurers and by members in the form of cost-sharing) varied by insurance market segment, with expenditures per member year growing faster for those enrolled in self-insured and large group markets when compared with those enrolled in mid-sized and small group markets (Figure 5). This difference was largely due to small and mid-sized employers shifting more costs to employees in the form of higher cost-sharing over the time period studied. Health spending per member year for the self-insured and large group markets grew 16.2 percent and 16.6 percent for the three year period, respectively, whereas health spending per member year for the mid-sized and small group markets both grew 15.4 percent during the same time period. From 2007 to 2008, medical trend for self-insured was *higher* than that for all fully insured markets, with self-insured experiencing a growth rate of 8.5 percent compared to 7.0 percent for fully insured employers during this time period.

Growth in health spending for members enrolled in individually purchased insurance, on the other hand, grew much more slowly at 2.0 percent for the three year period, with spending per member growing 4.4 percent from 2006 to 2007, and *declining* by 2.2 percent from 2007 to 2008. This experience in the individual market reflects the impact of the availability of new products – including Young Adult Plans and Commonwealth Choice Bronze products – as well as the influx of younger and healthier people into this market segment. However, it should be noted that average per capita expenditures for members enrolled in the individual market were 25 percent higher than overall per capita expenditures in 2008 reflecting the older population with greater health needs enrolled in the non-group markets. The market merger in 2007 made this market more affordable to members with a broader range of health needs.

Figure 5: Annual Growth in Expenditures per Member by Insurance Market Segment

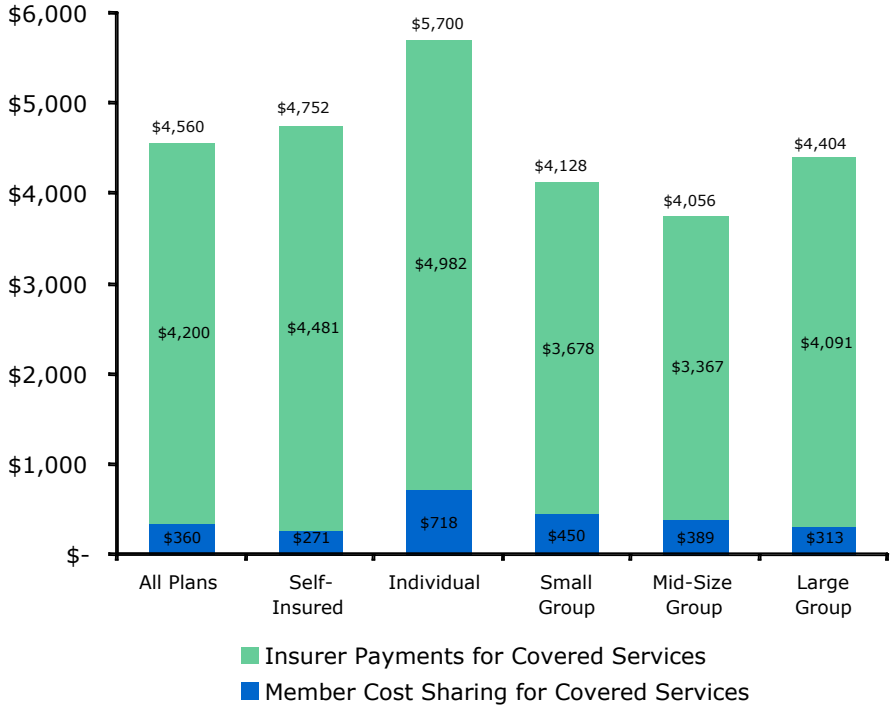


Trends in Consumer Cost Sharing

The percent of expenditures paid by members in the form of co-payments, coinsurance, and deductibles varies considerably by market segment. On average, members enrolled in individually purchased insurance paid the greatest percent of expenditures for covered services out-of-pocket (12.6 percent in 2008) and employees in self-insured group plans paid the least (5.7 percent in 2008).

These differences are even more dramatic when comparing the actual annual out-of-pocket spending paid by members of these different market segments. For example, whereas an employee with self-insured coverage paid on average $271 in 2008 in the form of cost-sharing, a member purchasing coverage on his or her own through the individual market paid on average more than twice that amount, or $718, in 2008 (Figure 6).

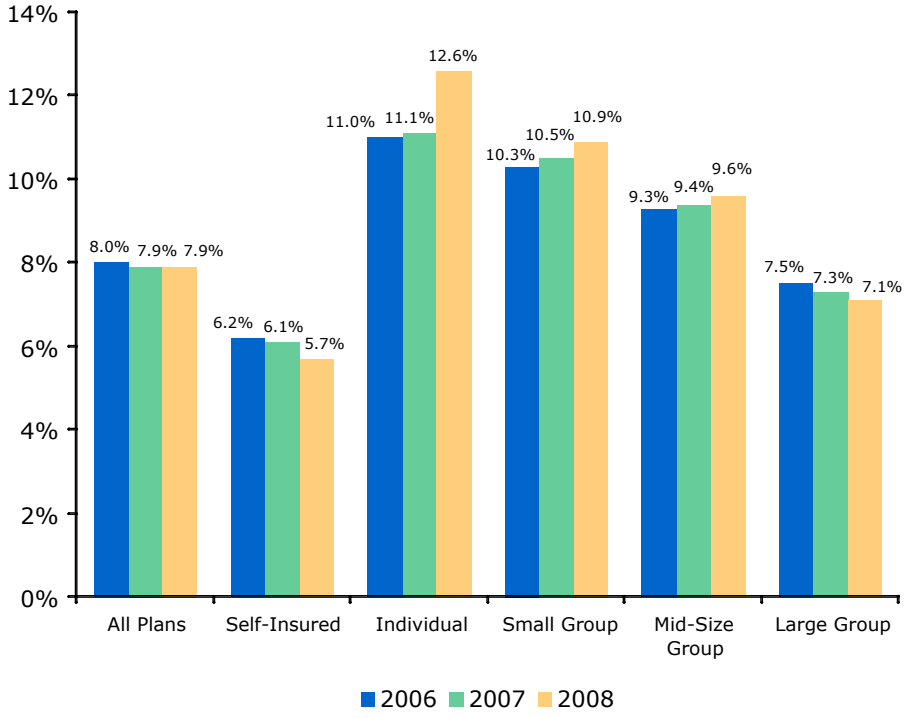
Figure 6: Average Annual Costs for Covered Services by Insurance Market Sector, 2008



Member cost-sharing grew more slowly than overall medical trends—on average, for all market segments combined, 14.1 percent from 2006 to 2008 (compared to 15.5 percent in total spending) (Figure 7). Cost-sharing grew as a percent of health spending for members purchasing individual coverage and for employees in small (<51) and mid-sized (51-499) groups. However, cost-sharing decreased as a percent of health spending for employees in large (500+) and self-insured groups during this time period. The reduction in cost-sharing for self-insured and large group plans probably reflects adjustments in benefit design (e.g., no increase in co-payment levels) that did not keep pace with expenditure trends. Conversely, greater cost-sharing in individual plans and for small and medium-sized groups most likely reflects increased deductibles (including new enrollment in high-deductible plans), co-payments, and/or coinsurance that exceeded expenditure trends.

Overall, the percentage of members enrolled in plans with high deductibles (above $1,000) rose from 4 in 2006 to 11 percent in 2008. While the data received for this project are unable to confirm where high deductible plans are growing most, it is likely that this growth in enrollment in high deductible plans is almost entirely in the individual and small group markets.

Figure 7: Consumer Cost Sharing as a Percent of Total Expenditures by Insurance Market Sector



Conclusions

The report's findings highlight areas of opportunity to address the growth in health care costs in Massachusetts. In particular, efforts to mitigate spending trends must address both the growth and variation in health care prices. In addition, a comprehensive cost containment program must promote coordination among providers to ensure that care is delivered in the most cost-effective and appropriate settings. Finally, there are opportunities for employers and consumers to better understand the value of the health care services they are receiving and the impact that their purchasing decisions can have on health trends.

Endnotes

[1] Hartman M, Martin A, Nuccio O, Catlin A, and the National Health Spending Accounts Team (2010). Health Spending Growth At A Historic Low In 2008. *Health Affairs* 29(1):147-155.

[2] Hartman M, Martin A, Nuccio O, Catlin A, and the National Health Spending Accounts Team (2010). Health Spending Growth At A Historic Low In 2008. *Health Affairs* 29(1):147-155.

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Publication Number: 10-43-HCF-06
Authorized by Ellen Bickelman, State Purchasing Agent

Printed on Recycled Paper